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Hawkins  
503.38097X00  
6-13-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: KAJIWARA et al.  
Serial No.: 09/493,080  
Filed: January 28, 2000  
For: SEMICONDUCTOR DEVICE  
Group: 2827  
Examiner: A. Chambliss

RECEIVED  
JUN 10 2002  
TECHNOLOGY CENTER 2800

RESPONSE TO ELECTION REQUIREMENT

Assistant Commissioner  
for Patents  
Washington, D.C. 20231

June 7, 2002

Sir:

In response to the election of species requirement dated May 8, 2002, applicants hereby elect Species A1 directed to a semiconductor device with a semiconductor substrate as part of a semiconductor element. With regard to this, it is noted that claims 1-24 read on the elected species. In particular, claims 1-18 explicitly recite a semiconductor substrate. Claims 19-24 recite a semiconductor chip. Referring to the Microsoft Computer Dictionary, Fourth Edition (published by Microsoft Press Copyright 1999), under the term "chip" it is stated "See integrated circuit." Correspondingly, an integrated circuit is defined as:

"A device consisting of a number of connected circuit elements, such as transistors and resistors, fabricated on a single chip of silicon crystal or other semiconductor material."

In other words, a semiconductor chip will always include a semiconductor substrate of "silicon crystal or other semiconductor material." For the Examiner's convenience, a copy of the above-noted pages from the Microsoft Computer Dictionary are enclosed herewith. Accordingly, by virtue of defining that the semiconductor device includes a semiconductor chip, it is respectfully submitted that claims 19-24 also read on the elected embodiment.


If the Examiner believes that there are any other points which may be clarified or otherwise disposed of, either by telephone discussion or by personal interview, the Examiner is invited to contact applicants' undersigned attorney at the number indicated below.

It is respectfully requested that any shortage in the fee be charged to the account of Antonelli, Terry, Stout & Kraus, LLP, Account No. 01-2135 (Case No. 503.38097X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

By

  
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Registration No. 28,141

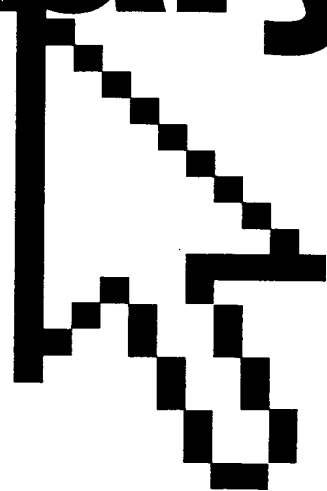
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703/312-6600

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# **Computer Dictionary**

**Fourth  
Edition**



PUBLISHED BY  
Microsoft Press  
A Division of Microsoft Corporation  
One Microsoft Way  
Redmond, Washington 98052-6399

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Library of Congress Cataloging-in-Publication Data  
Microsoft Computer Dictionary. -- 4th ed.

p. cm.

Previous eds. published under title: Microsoft Press computer dictionary

ISBN 0-7356-0615-3

1. Computers Dictionaries. 2. Microcomputers Dictionaries.

I. Microsoft Press computer dictionary.

QA76.15.M538 1999

004'.03--dc21

99-20168

CIP

Printed and bound in the United States of America.

4 5 6 7 8 9 MLML 4 3 2 1 0

Distributed in Canada by Penguin Books Canada Limited.

A CIP catalogue record for this book is available from the British Library.

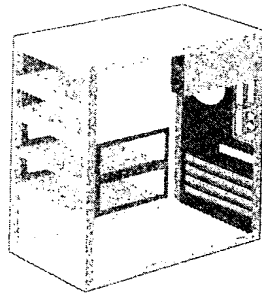
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**Acquisitions Editor:** Christey Bahn  
**Project Editor:** Kim Fryer

**chassis** \chas'ē\ *n.* A metal frame on which electronic components, such as printed circuit boards, fans, and power supplies, are mounted. See the illustration.



*Chassis.*

**chat**<sup>1</sup> *n.* 1. Real-time conversation via computer.

When a participant types a line of text and then presses the Enter key, that participant's words appear on the screens of the other participants, who can then respond in kind. Most online services support chat; on the Internet, IRC is the usual system. *See also* IRC. 2. An Internet utility program that supports chat. IRC has largely superseded it.

**chat**<sup>2</sup> *vb.* To carry on a real-time conversation with other users by computer. *See also* IRC.

**chat room** *n.* The informal term for a data communication channel that links computers and permits users to "converse" by sending text messages to one another in real time. Similar to the channels provided by IRC (Internet Relay Chat) chat rooms are available through online services and some electronic bulletin board systems (BBS). Chat rooms are often devoted to a particular subject or are conducted on a certain schedule. *See also* room, Chat, BBS, IRC.

**Cheapernet** *n.* *See* 10Base2.

**check bit** *n.* One of a set of bits that are added to a data message at its origin and scrutinized by the receiving process to determine whether an error has occurred during transmission. The simplest example is a parity bit. *See also* data integrity, parity bit.

**check box** *n.* An interactive control often found in graphical user interfaces. Check boxes are used to enable or disable one or more features or options from a set. When an option is selected, an x or a check mark appears in the box. *See also* control (definition 2). *Compare* radio button.

**check digit** *n.* A digit added to an account number or other identifying key value and then recomputed when the number is used. This process determines whether an error occurred when the number was entered. *See also* checksum.

**checkpoint** *n.* 1. A processing juncture at which the normal operation of a program or system is momentarily suspended in order to determine its environmental status. 2. A file containing information that describes the state of the system (the environment) at a particular time.

**checksum** *n.* A calculated value that is used to test data for the presence of errors that can occur when data is transmitted or when it is written to disk. The checksum is calculated for a given chunk of data by sequentially combining all the bytes of data with a series of arithmetic or logical operations. After the data is transmitted or stored, a new checksum is calculated in the same way using the (possibly faulty) transmitted or stored data. If the two checksums do not match, an error has occurred, and the data should be transmitted or stored again. Checksums cannot detect all errors, and they cannot be used to correct erroneous data. *See also* error-correction coding.

**chiclet keyboard** *n.* A microcomputer keyboard used on the first version of the IBM PCjr home computer. Chiclet keys are small and square, resembling the chewing gum pieces, and they act like pushbuttons, without the resistance and clear feedback of traditional keys. They are also much smaller and typically are spread out, so touch typing is more difficult than on a conventional keyboard.

**child** *n.* 1. A process initiated by another process (the parent). This initiating action is frequently called a *fork*. The parent process often sleeps (is suspended) until the child process stops executing. 2. In a tree structure, the relationship of a node to its immediate predecessor. *See also* generation (definition 2), tree structure.

**child directory** *n.* *See* subdirectory.

**child menu** *n.* *See* submenu.

**child process** *n.* *See* child (definition 1).

**chimes of doom** *n.* In Macintosh computers, a series of chimes that sound as a result of serious system failure.

**chip** *n.* *See* integrated circuit.

**instance** *n.* An object, in object-oriented programming, in relation to the class to which it belongs. For example, an object *myList* that belongs to a class *List* is an instance of the class *List*. *See also* class, instance variable, instantiate, object (definition 2).

**instance variable** *n.* A variable associated with an instance of a class (an object). If a class defines a certain variable, each instance of the class has its own copy of that variable. *See also* class, instance, object (definition 2), object-oriented programming.

**instantiate** *vb.* To create an instance of a class. *See also* class, instance, object (definition 2).

**Institute of Electrical and Electronics Engineers** *n.* *See* IEEE.

**instruction** *n.* An action statement in any computer language, most often in machine or assembly language. Most programs consist of two types of statements: declarations and instructions. *See also* declaration, statement.

**instruction code** *n.* *See* operation code.

**instruction counter** *n.* *See* instruction register.

**instruction cycle** *n.* The cycle in which a processor retrieves an instruction from memory, decodes it, and carries it out. The time required for an instruction cycle is the sum of the instruction (fetch) time and the execution (translate and execute) time and is measured by the number of clock ticks (pulses of a processor's internal timer) consumed.

**instruction mix** *n.* The assortment of types of instructions contained in a program, such as assignment instructions, mathematical instructions (floating-point or integer), control instructions, and indexing instructions. Knowledge of instruction mixes is important to designers of CPUs because it tells them which instructions should be shortened to yield the greatest speed, and to designers of benchmarks because it enables them to make the benchmarks relevant to real tasks.

**instruction pointer** *n.* *See* program counter.

**instruction register** *n.* A register in a central processing unit that holds the address of the next instruction to be executed.

**instruction set** *n.* The set of machine instructions that a processor recognizes and can execute. *See also* assembler, microcode.

**instruction time** *n.* The number of clock ticks (pulses of a computer's internal timer) required to retrieve an instruction from memory. Instruction time is the first part of an instruction cycle; the second part is the execution (translate and execute) time. *Also called* I-time.

**instruction word** *n.* **1.** The length of a machine language instruction. **2.** A machine language instruction containing an operation code identifying the type of instruction, possibly one or more operands specifying data to be affected or its address, and possibly bits used for indexing or other purposes. *See also* assembler, machine code.

**insulator** *n.* **1.** Any material that is a very poor conductor of electricity, such as rubber, glass, or ceramic. *Also called* nonconductor. *Compare* conductor, semiconductor. **2.** A device used to separate elements of electrical circuits and prevent current from taking unwanted paths, such as the stacks of ceramic disks that suspend high-voltage power lines from transmission towers.

**integer** *n.* **1.** A positive or negative "whole" number, such as 37, -50, or 764. **2.** A data type representing whole numbers. Calculations involving only integers are much faster than calculations involving floating-point numbers, so integers are widely used in programming for counting and numbering purposes. Integers can be signed (positive or negative) or unsigned (positive). They can also be described as long or short, depending on the number of bytes needed to store them. Short integers, stored in 2 bytes, cover a smaller range of numbers (for example, -32,768 through 32,767) than do long integers (for example, -2,147,483,648 through 2,147,483,647), which are stored in 4 bytes. *Also called* integral number. *See also* floating-point notation.

**integral modem** *n.* A modem that is built into a computer, as opposed to an internal modem, which is a modem on an expansion card that can be removed. *See also* external modem, internal modem, modem.

**integral number** *n.* *See* integer (definition 2).

**integrated circuit** *n.* A device consisting of a number of connected circuit elements, such as transistors and resistors, fabricated on a single chip of silicon crystal or other semiconductor material. Integrated circuits are categorized by the number of elements they contain. *See the table.* *Acronym:* IC. *Also called* chip. *See also* central processing unit.